Twitter Activity Analysis – Power BI Project

Objective

The goal of this project was to analyze a sample dataset of tweets to uncover trends in user activity and tweet types over time. The dataset was explored using Power BI to create intuitive visualizations that highlight behavioral patterns, volume distribution, and user engagement metrics.

Dataset Overview

- **File Name:** Tweet.csv
- **Total Records:** *(mention count if known)*
- **Key Columns Used:**
    - author_id
    - created_at
    - tweet_id
    - text
    - inbound
    - response_tweet_id
    - TweetType (derived)
    - Parsed time-based columns: hour, day of week, date

Visualizations

1. **Tweet Volume by Hour** *(Line Chart)*
    - **Purpose:** Shows tweet frequency by hour of the day.
    - **X-Axis:** Hour (0–23)
    - **Y-Axis:** Number of Tweets
    - **Title:** Tweet Volume by Hour
2. **Tweet Volume by Hour Grouped by Type** *(Clustered Column Chart)*
    - **Purpose:** Compares volume across hours, grouped by tweet type (inbound/outbound).
    - **X-Axis:** Hour
    - **Y-Axis:** Number of Tweets
    - **Legend:** Tweet Type

    - **Title:** Tweet Volume by Hour and Tweet Type
3. **Tweet Volume by User (Top 10 Author IDs)** *(Bar Chart)*
    - **Purpose:** Highlights the most active users in the dataset.
    - **X-Axis:** Author ID
    - **Y-Axis:** Number of Tweets
    - **Title:** Top 10 Most Active Authors
4. **Tweet Volume by Tweet Type** *(Donut Chart)*
    - **Purpose:** Visual breakdown of tweet type distribution.
    - **Values:** Count of Tweets
    - **Legend:** Tweet Type (Inbound / Outbound / Response)
    - **Title:** Tweet Volume by Tweet Type

Output Files

- **CSV Used:** Tweet.csv
- **PDF Export:** Visual summary of Power BI analysis
- *(Optional)* .pbix file for editable report

Conclusion

This Power BI dashboard provides a compact and effective look at how users and types of tweets are distributed over time. It's a useful tool for spotting peaks in activity, analyzing user engagement, and understanding message flow.